



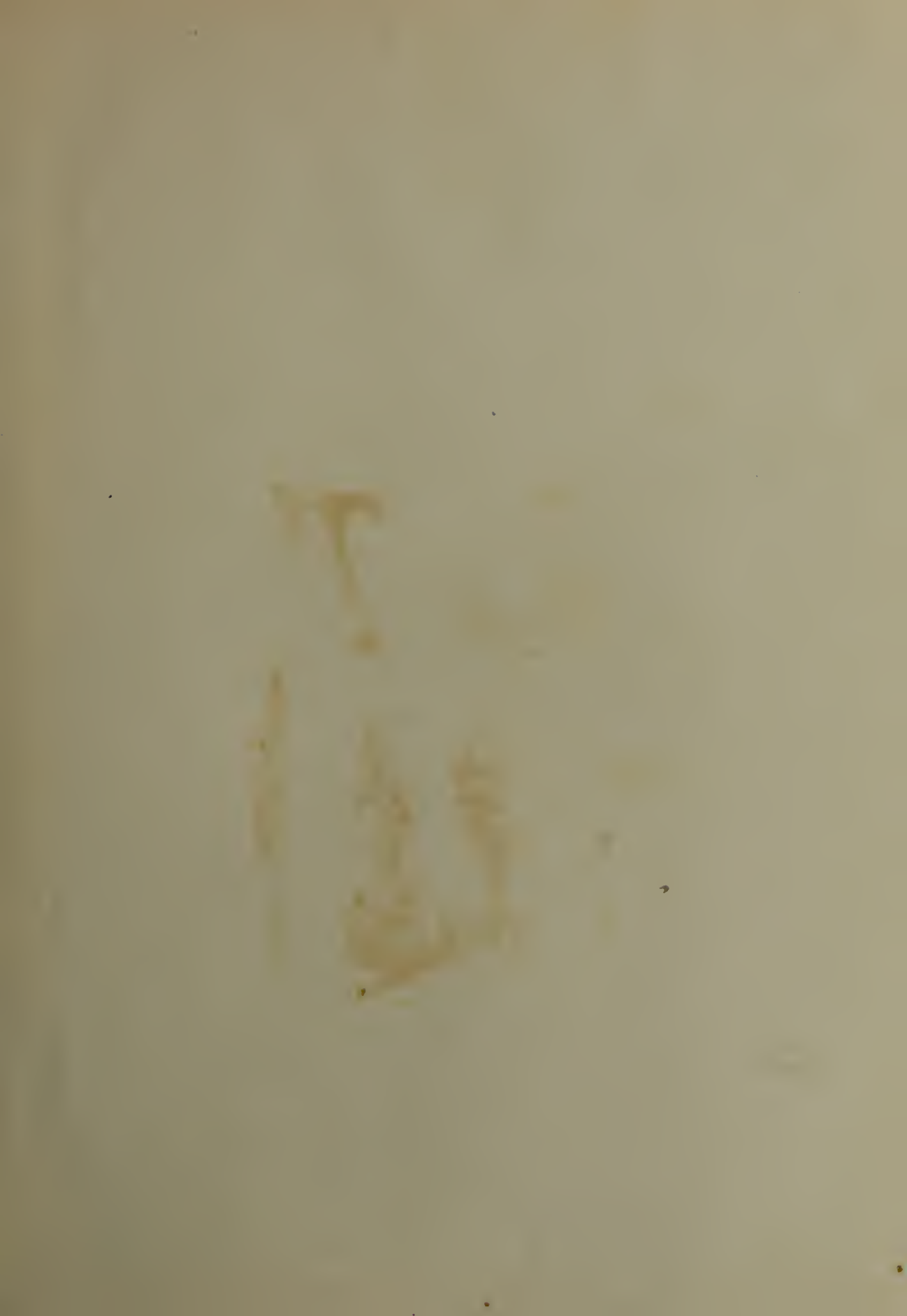


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ROBERT S. PEABODY FOUNDATION FOR ARCHAEOLOGY

ANNUAL REPORT  
1950

PHILLIPS ACADEMY  
Andover, Massachusetts



January 2, 1951

Mr. John M. Kemper  
Clerk of the Board of Trustees  
Phillips Academy  
Andover, Massachusetts

Dear Mr. Kemper:

It is a pleasure to be able to report the satisfactory progress of the program of intensive archaeological research being carried forward in northern New England and adjacent portions of Canada by the Robert S. Peabody Foundation. The Ellsworth Falls project, in which the Foundation has been cooperating with the Robert Abbe Museum of Bar Harbor for the last four years, has been successfully terminated. Originally undertaken as a means of gaining perspective and chronological depth for studies in coastal shell heaps, the excavations appear to have uncovered evidence of remains far older than anyone had anticipated. For the second season, the Foundation sent out the Northeastern Archaeological Survey. Operations this year were productive of greater results, and it appears likely that if the Survey can be continued for a number of years under the leadership of Mr. Stoddard, we shall reap, in increasing amount, benefit of his knowledge of the area and the people. In order to fill in gaps in our knowledge of the archaeology of south central Quebec, Mr. Edward S. Rogers made another survey by canoe, this time traversing the country between Lake Mistassini and Lake St. John.

Analysis of collections made at Titicut during a number of seasons by the Foundation and the Massachusetts Archaeo-





logical Society has progressed, but not as rapidly as hoped. The final report on this work may be delayed still further by reason of the fact that Mr. Hatshorne has not yet completed his study of the geology of the area. Although there has been no further opportunity to investigate the Indian shell heap buried under swamp mud and peat, near Provincetown, the archaeological material available has been studied by Mr. Ross Moffet, in collaboration with Mr. Johnson. The botanical evidence has been prepared, but it has been necessary to postpone further study of it in the Biological Laboratory at Harvard. It has not been possible to investigate the locality near South Hadley, where Dr. L. R. Wilson, of the University of Massachusetts discovered cobs of a primitive type of corn in an abandoned channel of the Fort River. Both locations give promise of evidence of man's presence under circumstances which may make it possible to date in some way the steps in man's progress along the road toward higher culture here in New England.

The program of archaeological reconnaissance in south central Quebec, carried on by your Foundation alone, has thrown new light on the problem of culture contacts between the Northeast and Siberia, by way of Alaska. In spite of the fact that the archaeology of south central Quebec was completely unknown, it has been common archaeological practice to offer the route from Hudson Bay and James Bay via various rivers to the St. Lawrence valley as a means of introducing into New England and the Northeast certain traits which are reflected among archaeological remains from



Alaska and even Siberia. Discovery by the Messers. Edward S. Rogers and Murray H. Rogers that archaeological remains of the region lying between Lake Mistassini and the Ottawa valley, to the south, and the Harricanaw River and James Bay, on the west were of a new and unknown character which could not be fitted into this theoretical scheme came as a great surprise. It is evident that they discovered remains of a people hitherto unknown archaeologically, concerning whose position in the chronological column we are as yet in ignorance. It seemed advisable to determine the eastward limits of the distribution of these remains, particularly as it concerns contact with the eastern St. Lawrence valley. Since the Saguenay River and Lake St. John offer tempting avenues for the passage of cultural contacts, at least on the map, it was felt that another traverse should be made, to cover the area between Lake Mistassini and Lake St. John. Accordingly, Mr. Edward S. Rogers, this time accompanied by Mr. Roger A. Bradley, a Dartmouth student, went from Senne-terre, P. Q., via the Bell River and a series of lakes and rivers to Lake Mistassini, and thence, via lakes and rivers to the Ashuapmucuan River and Lake St. John, completing the reconnaissance of the country between the Saguenay and the Ottawa, and Lake Mistassini and James Bay.

Although boundaries cannot yet be formulated, as we had hoped, the summer's trip did disclose the fact that people closely allied to those of the northeastern United States were familiar with the region, almost as far north as Lake



Mistassini, but in relatively late times, and that they either brought earthenware pots with them or made them on the shores of these northern lakes. The collection which was brought back to the museum is not large, due to the limitations of canoe travel, but it exhibits differences in stone tools, and in the technique of making them which have not as yet been assessed. It is hoped that a report on this work may be prepared during the winter, for publication in the spring. As was the case in 1948, Mr. Rogers' trip was financed in part by the Foundation, and in part by a generous benefactor who has been interested in the problem.

For a second summer, Mr. Joseph Hartshorne, graduate student in the Department of Geology, Harvard University, under the direction of the late Dr. Kirk Bryan and Mr. Johnson, has studied the geology of the country surrounding the site at Titicut, to provide data to be used in the studies of the cultural remains found there. In the course of the archaeological work it was established that some of the older tools appeared to be closely related to an old land surface marked by wind-cut stones and other evidence of a cold, dry, windy climate, such as might be found on the periphery of a continental glacier. Mr. Hartshorne's studies seem to confirm the presence of man in southern New England at a time when continental ice was not far off. Because of the radical nature of his conclusions in the Foundation's report on the Titicut site, publication will be delayed until all evidence can be checked and rechecked. If his conclusions are correct, this will place man in New





England many thousands of years prior to any period contemplated in even the wildest guesses made heretofore.

The Foundation has suffered a grievous loss in the death of Dr. Kirk Bryan, of Harvard University. His understanding of archaeological problems was unusual among geologists. His inspiration has been back of much that the Foundation has done--the work at Grassy Island, the Boylston Street Fishweir, and Titicut in particular. We have profited by his wisdom and inspiration. In common with many other American archaeologists, we shall sadly miss his guidance. It is appropriate that Mr. Johnson, who worked with Dr. Bryan on many problems, has been asked to write an obituary notice for American Antiquity.

Intelligent approach to archaeological problems of the Northeast has been made difficult by lack of reliable data, not only regarding the distribution of remains but also as regards the mode of occurrence of specific forms and types. To secure more adequate data regarding distribution of remains, the Foundation has sent out the Northeastern Archaeological Survey to search for promising locations and examine local collections. The Survey, with a crew of two, has travelled in a light pick-up truck for which the Academy carpenter shop has built an ingenious screened canopy and a deck which serves as a cover to lock over the equipment and a surface on which air mattresses and sleeping bags can be spread within the screened area. Living in this truck, the crew has been





able to visit and study promising sites without concern for lodgings or need to pitch tents. In this manner it has been possible to secure information regarding a number of sites which could have been easily reached in no other way.

During the summer of 1949, under the leadership of Mr. Robert H. Dyson, Jr., accompanied by Mr. Theodore L. Stoddard, Jr., the survey covered some 8000 miles through Maine and New Brunswick, largely with negative results. In 1950, it was planned to test intensively two sites discovered during the previous year, and to re-examine Swan Island, near Richmond, Maine, where a large Indian town was allegedly located in early historic times. With the opening of the season, Mr. Dyson and Mr. Stoddard went to a small, but apparently important site on the Molus River, near Richibucto, New Brunswick. This site provided Indian material dated at the late end of the prehistoric time scale. Thus it forms a well documented point of departure for further research in the prehistoric sequence. From the last week of July and continuing until the close of the **field** season, attention was centered on a site on the Dennys River near Dennysville, discovered during the previous year. Because of the high level of local employment, it was impossible to hire more than one high school boy, so that most of the labor was accomplished by Mr. Stoddard, who was in charge of this project, assisted by Mr. Dyson, and, later, by Mrs. Stoddard. Although permission was granted by the Governor's Council to go on



Swan Island, a state game preserve, and to excavate if need be, it was decided that excavations at Dennysville should be diligently prosecuted. Accordingly, with the permission of the Commissioner of Inland Fisheries and Game, examination of Swan Island was postponed until 1951.

The site near Dennysville was found to comprise remains of two fishing villages which had been occupied at different times, but which had been at approximately the same location. This was not at first apparent, but it became clear after a buried soil profile, formed by the weathering of an old land surface was recognized beneath one portion of the site. Implements found here were of a character quite different from that of the implements found less than one hundred yards downstream. The site farther downstream is situated on a much more recent fill of silt on which no profile of weathering occurs, and which seems to have been still in the process of growth at the time it was occupied. This sequence was upheld conclusively when material from the older site was found downstream in a position into which it seems to have been washed, along with the silt which formed the terrace on which the later village was located. These observations at once threw the two groups of artifacts into the proper chronological relationship, and provided a small degree of perspective. So important was this, that Mr. and Mrs. Stoddard continued work there to secure all possible information until they were driven out by hard frosts in late September.



During inclement weather Mr. Stoddard visited a number of sites on and about the shores of Cobscook Bay and adjacent lakes, and examined local collections in private hands. He was cordially received, and one enthusiastic collector went so far as to present him his entire collection from the Dennys River site, with full information as to the provenience of each specimen. By means of these visits he was able to secure for the Foundation a mass of excellent information regarding the occurrence of different types of artifacts, not only spatially, but also vertically, in some cases, from the point of view of culture sequences. A number of sites from which archaeological specimens have been taken are now submerged at high tide. In view of this information, assiduous search of some of the older river terraces is in prospect for the coming year.

Mr. Byers resumed work with Mr. Wendell S. Hadlock of the Abbe Museum, continuing excavations at the Smith Farm, near Ellsworth Falls, Maine, where they had been working during the previous season. With three hired hands and three college students, the 1950 party succeeded in completing more work in four weeks than it had been possible to complete with a larger group of students, working over a longer period of time and at greater expense. This experience indicates that it will probably not be to the best interests of the Foundation to take out Academy students who must be housed, fed, and supervised--activities which are expensive, and productive of little in the way of returns.





It seems clear that the protracted program of excavation at Ellsworth Falls has produced irrefutable evidence that the region has been occupied for a longer period than anyone had realized. Remains have been found at depths of more than four feet below the surface. So far it has not been possible to analyse the collections, but preliminary examination shows that forms of implements and styles of pottery similar to those from shell heaps are found only in the upper foot or eighteen inches of soil, and that underlying them are forms similar to those found by Mr. Moorehead and others in so-called "Red Paint" cemeteries. Beneath these, in turn, are still older forms, in many cases not previously known from this part of New England. There is similarity between the remains found in the upper eighteen inches of soil at this site and certain remains found in New York state. The age of these New York state remains has recently been established as being in the neighborhood 2800 years. If we may assume 2800 years as a rough figure for the amount of time required to build up the eighteen inches of soil in which similar remains occur at Ellsworth Falls, we have a time gauge of sorts, perhaps not too reliable. The lowest objects lay some 48 inches below the surface. At the same rate of deposition, it would require more than 5000 years to build up the 48 inches of sediment which cover the deepest implements. Possibly even more time has elapsed since the first fisherman camped at the falls of the Union River.





It may be of interest to mention parenthetically the most recent advance in methods of archaeological dating. This depends on characteristics of a radioactive isotope of carbon, with an atomic weight of 14, which is produced by the action of certain components of cosmic radiation on atmospheric nitrogen. Carbon 14 disintegrates into its component parts at a rate equal to that at which it is produced, maintaining an equilibrium. Radiocarbon is included in atmospheric carbon dioxide in equilibrium concentration. Some atmospheric carbon dioxide is inhaled by animals. Plants utilize it in the photosynthesis of starch, and thus the radiocarbon which it contains becomes an integral part of plant structure. All animal flesh is derived either directly or indirectly from plants. The carbon in all living things is constantly exchanged, directly or indirectly, with atmospheric carbon dioxide. Thus radiocarbon is found in the carbon of all living things in a constant proportion, which can be measured.

When an organism dies it ceases to take in radiocarbon, and that which it has taken in during life commences to disintegrate. Dr. W.F. Libby, of the Institute for Nuclear Studies of the University of Chicago, assisted by Dr. J.N. Arnold, has discovered that radiocarbon breaks down at a known rate, which reduces its strength by one-half in a period of 5560 years, with a possible error of 30 years either way. As a result of this phenomenon, it is possible to compute the length of time which has elapsed



since the death of an organism by determining the ratio between the concentration of radiocarbon in a sample taken from the organism and the equilibrium concentration in living matter. This method can be most successfully applied to wood, charcoal, or other vegetal matter, and with somewhat less success to antler and shell.

A sample of wood, taken from the buried surface of mudflats which covered the Boylston Street Fishweir, studied and reported on by this Foundation, was submitted for analysis by Dr. Elso S. Barghoorn. Its age is determined as 3851 years, with a possible error of 390 years either way. The lower peat, through which the stakes of the weir were driven after it had been submerged by rising sea water, was laid down 5717 years ago, with a possible error of 500 years. It is clear that truly native Bostonians were probably using the weir between 4000 and 5000 years ago.

Mr. Johnson continues as Chairman of the Committee on Carbon 14 of the American Anthropological Association. As yet there has been no opportunity for submitting samples for dating from the Foundation's collections, but this will be done during the winter.

Specimens from New York state which have been analyzed show that fishermen and hunters lived there more than 5000 years ago, and that 1000 years before Christ was born conservative New Yorkers were being disturbed by radical new ideas, leading to the local manufacture of pottery and



ultimately to corn agriculture. Ages determined in New York state offer dates which are valid for use with comparable cultural remains in New England, provided they are not taken too literally. Thus we may infer that the lower levels of the sites excavated at Ellsworth Falls probably can boast of an antiquity of 5000 years.

Work in the Museum is progressing satisfactorily. Mr. Stoddard is now employed here on a temporary basis, working up the report of the Northeastern Archaeological Survey--a process which involves not only study of the artifacts, but also exhaustive examination of the literature. It is hoped that a report will be ready for publication during the summer.

Since Mr. Byers' return this fall, he has been devoting the greater part of his time to work in the Museum. The material collected at Ellsworth Falls in 1949 and 1950 has been catalogued. This, together with the specimens brought back by Mr. Rogers, and the Northeastern Archaeological Survey has increased our collections by roughly 1700 objects.

At Mr. Kemper's suggestion, Mr. David L. de Harport, is teaching the course in Anthropology. Mr. de Harport took the place of Mr. Wilbert K. Carter, as temporary teacher during Mr. Byers' illness. This arrangement frees Mr. Byers to carry out necessary Museum work. It has also made it possible for him to resume study of the





collections from the Nevin and Richards shell heaps secured in the seasons of 1936-38 inclusive. It is hoped that a report will be ready for publication in 1952.

Because of the fact that Mr. Johnson, with the consent of Mr. Kemper and Mr. Byers, accepted the post of Executive Secretary of the American Anthropological Association, a large part of his time has been spent in the interests of that organization. Since the fall of 1949 he has been busy with the reorganization of the business office--a task requiring more time than expected. It was thought that Mr. Johnson would be able to devote at least half of his time to Foundation matters, but the demands of the job of Executive Secretary have been greater than he had anticipated.

Mr. Johnson has been busy with work for several committees, including the Committee for the Recovery of Archaeological Remains, concerned with salvaging archaeological material in danger of destruction or inundation during the construction of Federal multi-purpose dams, and the American Anthropological Association's Committee on Radio-active Carbon 14. He will prepare the summary report of the latter committee which will cover the results of the whole program of investigation. At the meeting of the Society for American Archaeology, held in Norman, Oklahoma, in May, he presented a paper covering the progress of this undertaking.

Election to Fellowship in the Geological Society of America is an honor for a geologist. Such recognition of





Mr. Johnson's contribution to geological knowledge through participation in the work on the Boylston Street Fishweir, the submerged Indian camp on Grassy Island, the site at Titicut, and in the Yukon comes as a double honor for an archaeologist.

Mr. Johnson presented a paper at a symposium on archaeological methods held at the offices of the Viking Fund, in New York City. This paper has been revised, and submitted for publication. He also attended the Alaska Science Conference, and the meeting of the National Council for Historic Sites and Buildings, of which he is a charter member.

Once again the American Journal of Archaeology published Mr. Johnson's review of archaeological work in the New World. The latest account covers 1949.

In 1949 the Foundation received a gift of 46 miscellaneous Eskimo archaeological specimens from the Reverend F. M. Grubb, a Moravian Missionary now at Hebron, Labrador. This gift, which was not recorded in the last Annual Report, carries a significance out of all proportion to its size. The specimens were brought back by Edward M. Thornton, P.A. '50, who made the trip north with Commander Donald B. MacMillan in the summer of 1949. The story of the tie between Mr. Grubb and Phillips Academy is one which goes back to 1929 when Mr. Lawrence M. Shields first met the Reverend Mr. Grubb at Hopedale. Since that time Mr. Shields has visited him on three or four occasions, and his missionary



work has been aided nearly every year by gifts of small sums of money sent him by various student groups, or occasionally by the Foundation in acknowledgement of gifts of archaeological specimens which he has made. When Thornton brought in the gift in 1949, he left word that it had been sent by Mr. Grubb in recognition of contributions to missionary work among the Eskimos by Circle A and the Phillips Society. It is a pleasure to record this somewhat material expression of his warm appreciation of the interest in his welfare shown by Phillips Academy, and to report that as a result of his interest we are slowly gathering a rather nice collection from the Labrador Eskimos.

The Library continues to grow satisfactorily, and although we lack some of the older serials in our field, we are abreast of current literature and can boast of a rather complete archaeological library for the northeast. During the year we accessioned 90 volumes, of which 53 were received as the result of exchanges with other institutions to which we send our publications; the remaining 37 volumes were purchased. Through Dr. Darling's continued interest, Mrs. Dorothy Bloom has been coming over from the Oliver Wendell Holmes Library one day a week to work with our Secretary in our library. She has given Miss Rosemary Sheehy elementary training, so that they have been able to work together on the task of bringing the catalogue up to date. A backlog of unlisted series and other items accumulated because recent secretaries lacked librarian's train-



ing, but this backlog is being cut down slowly. As Mrs. Bloom's work progresses, the titles from the Foundation's library are added to the Union Catalogue in the Oliver Wendell Holmes Library.

The Foundation maintains exchange agreements with 88 institutions, not only in this country, but also in Canada, Mexico, Central and South America, and Europe. Because of the nature of our library, comprising early accounts and other items not easily obtainable, we have received requests to lend our books to persons not connected with the Foundation or the Academy. In the case of students, we have sent books on inter-library loan, but we have always sent volumes from our library by mail directly to responsible persons, who have never yet abused the privilege. Thus the library is of service to students of our field, no matter where they may be situated.

It is clear that your Foundation has continued to take an active part in anthropological undertakings of a national character. However, a quantity of unpublished data has accumulated, and it is evident that no new commitments should be made, nor further field work undertaken, except of an emergency nature, by Mr. Byers or Mr. Johnson until the data on the Mevin and Richards shell heaps, the excavations at Titicut, and the Andover-Harvard Yukon Expedition are prepared for publication. Thus the only field work which is projected for the summer of 1951 is the work of the Northeastern Archaeological Survey, under the leader-



ship of Mr. Stoddard. Having taken stock, we will then be in a position to embark on a subsequent campaign with greater understanding and knowledge of the archaeological problems which we face.

For the first time since the founding of the Massachusetts Archaeological Society, under our aegis, some twelve years ago, the Foundation and the Society have no official connections. Because of the need to conserve all his energies, Mr. Byers withdrew his name from the slate of nominees in which it had been included as candidate for the office of Editor. For eleven of the twelve years of the Society's life he had occupied that post. Although the Foundation no longer can boast an official connection, it is Foundation policy to continue to aid the Society and further its work as opportunity offers.

Respectfully submitted,

*Douglas S. Byers*  
Douglas S. Byers, Director







